EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	64	non-deterministic adj event	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:13
L2	781	(storage stor$3) near2 (checkpoint$3 check-point$3 "check point")	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:18
L4	275	(register) same processor same (checkpoint$3 check-point$3 "check point")	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:23
L5	1379040	(error$5 or fault$3 or problem or malfunction or fail$4) same (after subsequent follow$3 trail$3)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:26
L6	161	2 same 5	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:26
L7	6	6 and 1	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:26
L8	40	6 and 4	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:26
L9	708	(714/2).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:28
L10	647	(714/13).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:28
L11	826	(714/15).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:28
L12	1810	(714/38).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:44
L13	244	(714/16).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:44
L14	5317	hardware same (error$5 or fault$3 or problem or malfunction or fail$4) same recover$3	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:49
L15	0	8 and 9	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:49
L16	6	8 and 10	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:50

L17	6	8 and 11	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:50
L18	3	8 and 12	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:50
L19	1	8 and 13	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:50
L20	3388	(lead$3 or trail$3) adj thread	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:51
L21	183	((lead$3 or primary) adj thread) same ((trail$3 or secondary or following) adj thread)	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:57
L22	73	21 and 5	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 15:57
L23	45	21 same 5	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 16:02
L24	2	23 and 9	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 16:02
L25	1	23 and 10	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 16:03
L26	2	23 and 11	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 16:03
L27	1	23 and 12	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 16:03
L28	0	23 and 13	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 16:04
L29	15	23 and ("714"/$).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/12/28 16:05
L30	3	29 and 1 and 2	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/12/28 16:05

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hardware and recovery and multi-thread and checkpoint and e   **SEARCH**
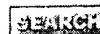
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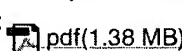
1 ReVive: cost-effective architectural support for rollback recovery in shared-memory   ■
     multiprocessors
     Milos Prvulovic, Zheng Zhang, Josep Torrellas
     May 2002 **ACM SIGARCH Computer Architecture News , Proceedings of the 29th**
               annual international symposium on Computer architecture ISCA '02, Volume
               30 Issue 2
     Publisher: IEEE Computer Society, ACM

     Full text available: 📄 pdf(1.38 MB) 📑   Additional Information: full citation, abstract, references, cited by, index
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     This paper presents ReVive, a novel general-purpose rollback recovery mechanism for
     shared-memory multiprocessors. ReVive carefully balances the conflicting requirements of
     availability, performance, and hardware cost. ReVive performs checkpointing, logging,
     and distributed parity protection, all memory-based. It enables recovery from a wide class
     of errors, including the permanent loss of an entire node. To maintain high performance,
     ReVive includes specialized hardware that performs frequent o ...

     Keywords: fault tolerance, shared-memory multiprocessors, rollback recovery, recovery,
   BER, logging, parity, checkpointing, availability

2 SafetyNet: improving the availability of shared memory multiprocessors with global   ■
     checkpoint/recovery
     Daniel J. Sorin, Milo M. K. Martin, Mark D. Hill, David A. Wood
     May 2002 **ACM SIGARCH Computer Architecture News , Proceedings of the 29th**
               annual international symposium on Computer architecture ISCA '02, Volume
               30 Issue 2
     Publisher: IEEE Computer Society, ACM
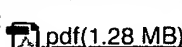
     Full text available: 📄 pdf(1.28 MB) 📑   Additional Information: full citation, abstract, references, cited by, index
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     We develop an availability solution, called *SafetyNet,* that uses a unified, lightweight
     checkpoint/recovery mechanism to support multiple long-latency fault detection schemes.
     At an abstract level, *SafetyNet* logically maintains multiple, globally consistent
     checkpoints of the state of a shared memory multiprocessor (i.e., processors, memory,
     and coherence permissions), and it recovers to a pre-fault checkpoint of the system and

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Terms used:
hardware and **recovery** and **multi thread** and **checkpoint** and **error** and **subsequent** and **storage**

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81 Dynamic Verification of Sequential Consistency   ▬
◆ Albert Meixner, Daniel J. Sorin
May 2005 **ACM SIGARCH Computer Architecture News , Proceedings of the 32nd
         annual international symposium on Computer Architecture ISCA '05**, Volume
         33 Issue 2
Publisher: IEEE Computer Society, ACM Press
Full text available: ⬛ pdf(146.68 KB)   Additional Information: full citation, abstract, index terms

> In this paper, we develop the first feasibly implementable scheme for end-to-end dynamic
> verification of multithreaded memory systems. For multithreaded (including
> multiprocessor) memory systems, end-to-end correctness is defined by its memory
> consistency model. One such consistency model is sequential consistency (SC), which
> specifies that all loads and stores appear to execute in a total order that respects program
> order for each thread. Our design, DVSC-Indirect, performs dynamic verification ...

82 An abstract model of rollback recovery control in distributed systems   ▬
◆ Jiannong Cao, K. C. Wang
October 1992 **ACM SIGOPS Operating Systems Review**, Volume 26 Issue 4
Publisher: ACM Press
Full text available: ⬛ pdf(1.30 MB)   Additional Information: full citation, abstract, index terms

> This paper develops an abstract model which presents a method of uniform description of
> different rollback recovery control algorithms for distributed systems. We first developed
> a general definition of the distributed rollback recovery control problem. The concept of a
> distributed recovery control system (*DRC system*), consisting of distributed recovery
> control units (*DRC units*), is proposed to model recovery with various control
> granularities. Then, we developed a graph model, cal ...

83 The space shuttle primary computer system   ▬
◆ Alfred Spector, David Gifford
September 1984 **Communications of the ACM**, Volume 27 Issue 9
Publisher: ACM Press
Full text available: ⬛ pdf(5.34 MB)   Additional Information: full citation, references, citings, index terms

Keywords: PASS, avionics system, space shuttle

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Search Query Display

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#	Query	Results
#1	(((hardware)<in>metadata) <and> ((multi-thread) <in>metadata))<and> ((recovery and checkpoint) <in>metadata)	0
#2	(((checkpoint)<in>metadata) <and> ((error occurred subsequent)<in>metadata))<and> ((storage)<in>metadata)	0
#3	(((register architectural state)<in>metadata) <and> ((checkpoint)<in>metadata))<and> ((error detect) <in>metadata)	0
#4	(((leading thread)<in>metadata) <and> ((trailing thread) <in>metadata))<and> ((subsequent checkpoint)<in>metadata)	0
#5	(((checkpoint)<in>metadata) <and> ((hardware recovery) <in>metadata))<and> ((multi-threaded)<in>metadata)	0
#6	(((hardware)<in>metadata) <and> ((recovery)<in>metadata)) <and> ((multi-threaded)<in>metadata)	7
#7	(((hardware)<in>metadata) <and> ((recovery)<in>metadata)) <and> ((multi-threaded)<in>metadata)	7
#8	(((hardware)<in>metadata) <and> ((recovery)<in>metadata)) <and> ((multi-threaded)<in>metadata)	7
#9	(((hardware)<in>metadata) <and> ((recovery)<in>metadata)) <and> ((multi-threaded)<in>metadata)	7
#10	(((hardware)<in>metadata) <and> ((recovery)<in>metadata)) <and> ((multi-threaded)<in>metadata)	7

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